Direct Testimony of Richard Florence
On Behalf of Ameritech Illinois

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Introduction

Q. Please state your name and business address.

A. My name is Richard J. Florence, and my business address is 444 Michigan Avenue, Detroit, Michigan 48226.

Q. By whom and in what capacity are you employed?

A. I am employed by Ameritech as Director – Cost Development/Network Cost Models.

Q. Please describe your education, professional affiliations, and company experience.

A. I graduated from Wayne State University in 1972 with a Bachelor of Science degree in electrical engineering. In 1976, I received a Masters degree in business administration from the University of Detroit. In 1998, I received a Masters of Science in Finance degree from Walsh College.

I have also attended numerous classes, seminars, and symposia to broaden my knowledge and help keep abreast of current issues impacting my job responsibilities. I am a registered Professional Engineer in the State of Michigan, a member of the Engineering Society of Detroit, and the Institute of Electrical and Electronic Engineers. I have been

employed by Ameritech since 1972. Until 1994, my duties primarily involved Michigan. Since then, my position has been regional.

I have been responsible for service cost issues since 1976. Originally, I was given responsibility for the preparation of cost studies for private line services, basic exchange and local services, and customer premises equipment. In 1983, in addition to those services, I became responsible for the preparation of cost studies for intraLATA toll and WATS services, information and operator services, pay phone services, central office services such as Custom Calling and Touch Tone, and the central office portion of Centrex services. In 1991, I was assigned responsibility for the preparation of cost studies for all intrastate services. In late 1993, as a result of organizational changes in the company, my new title became Manager – Regulatory. In that capacity, I served as the Michigan regulatory contact on various cost and other economic issues.

In September of 1994, I moved to the economic analysis group, and my responsibilities were expanded to include providing economic analysis support to the entire Ameritech region. In addition, I was responsible for performing cost studies, assisting the Ameritech cost managers on cost study methodology issues, and reviewing cost studies performed by Ameritech personnel for consistency and accuracy.

In 1996, my responsibilities were broadened to include managing network cost model use and development throughout the Ameritech region and managing the development of cost studies for various services and Unbundled Network Elements (UNEs). I have also

participated in workshops held with the Illinois Commission Staff on cost methodology and cost models.

I have testified on cost matters in numerous proceedings involving issues such as Customer Owned Coin Operated Telephone Service, Message Toll Service, Switched and Special Access Services, Directory Assistance service, Centrex service, E9-1-1 billing issues, unbundled network elements, collocation, service provider number portability, pole attachments and conduit occupancy, and basic local exchange service. Additionally, I have submitted testimony regarding the Total Service Long Run Incremental Cost (TSLRIC) methodology used in Michigan for cost studies for services, which is similar to Illinois' Long Run Service Incremental Cost (LRSIC) methodology. I have also submitted testimony on the Total Element Long Run Incremental Cost (TELRIC) methodology used for cost studies for UNEs. In addition, I provided testimony in a Michigan complaint case by BRE Communications d/b/a Phone Michigan, on the costs for unbundled loops and additional costs incurred in special construction situations.

Also, I recently testified in ICC Docket 99-0525 on cost matters similar to those raised in the Michigan complaint case by BRE Communications. I have also submitted direct testimony on a cost study for pole attachments and conduit occupancy in ICC Docket 98-0397.

Purpose

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to present a study of the forward-looking service ordering and line connection related nonrecurring costs incurred by Ameritech Illinois when Telecommunications Carriers (TCs) order analog and digital unbundled loops. I will also present separate service ordering non-recurring cost studies for unbundled local switching (ULS). These nonrecurring cost studies are in response to the Second Interim Order in Docket 96-0486/0569 consolidated, ("Order") where the Commission ordered Ameritech Illinois to perform specified new nonrecurring cost studies. (Order, pages 88-90)

Also, these cost studies support the nonrecurring charges for the Unbundled Local Switching with Interim Shared Transport (ULS-IST) and existing combinations (UNE-P or UNE-Platform) offerings described by Messrs. Suthers and Hampton.

Q. In general terms, what are nonrecurring costs?

A. Nonrecurring costs are those one-time expenses associated with the work functions and activities performed in conjunction with the ordering and provisioning of telecommunications services and UNEs.

Q. The Commission Order required Ameritech Illinois to revise and submit new service ordering cost studies. Did Ameritech Illinois comply with the Commission Order?

A. Yes, it did. Ameritech Illinois is submitting new service order nonrecurring cost studies as well as a new line connection cost study in this proceeding.

Q. What did the Commission state regarding service ordering and line connection charges?

A. The Commission stated that, "we will adopt Staff's suggestion that Ameritech Illinois recalculate its service ordering costs based on a primarily automated process, and resubmits those service ordering costs for further review and approval. As an interim measure we will adopt Mr. Starkey's proposal for a service ordering charge for unbundled loops of $13.17." (Order, page 89)

Regarding line connection charges, the Commission stated that, "As we indicated in our discussion of service order charge, we are dissatisfied with the backup support for Ameritech Illinois' calculation. Accordingly, we shall adopt Dr. Ankum's suggestion that the labor estimate be reduced by 50% until such time as Ameritech Illinois provides more support for a different rate." (Order, page 90)

Q. Do the nonrecurring service ordering cost studies Ameritech Illinois is submitting respond to the Commission's concerns regarding the use of automated service ordering processes?

A. Yes. The service ordering cost studies are based on the assumption that all orders are electronically transmitted by the TCs to Ameritech's service center.

Q. Did the Commission Order provide any other guidance regarding the type of cost studies that Ameritech Illinois should perform?

A. Yes. On pages 89 - 90 of the Order, the Commission stated, "The study we are suggesting could take the form of a time and motion study. Alternatively, at Ameritech Illinois' option, an approach could be used which relies on estimates of subject matter experts. That approach should start with an identification and documentation of forward-looking work flows, identification of estimators, the development of detailed written estimation instructions, provisions for averaging the individual estimates, development of documentation, etc."

Q. Are the cost studies that Ameritech Illinois is submitting based on time and motion studies and the use of subject matter experts (SMEs) so as to respond to the Commission's request for more cost study detail and support?

A. Yes. Ameritech Illinois used a combination of time and motion study techniques and SME interviews in its updated service order and line connection nonrecurring cost studies. Additionally, significantly more cost study data and detail is being provided in support of these updated studies. See Schedule RJF-3.

Q. Has the FCC addressed the issue of UNE nonrecurring costs?

A. Yes. In Paragraph 743 of its order in CC Docket 96-98 (the "First Report and Order"), the FCC stated that "incumbent LEC rates for interconnection and unbundled elements must recover costs in a manner that reflects the way that they are incurred."

Q. Do the cost studies you are submitting comply with the FCC's requirements?

A. Yes.

General Description of Cost Studies

Q. When and by whom were the cost studies developed?

A. The studies were originally developed in the fourth quarter of 1997 and updated in the December 1999 to January 2000 timeframe. Both the original and updated studies were conducted by a team working under my direct supervision and control.

Q. What UNE processes were studied?

A. The UNE nonrecurring cost studies focused on the ordering and provisioning processes for unbundled analog and digital loops and the ordering process for ULS line and trunk ports.

Q. What type of work functions are involved in the ordering and provisioning of these UNEs to TCs?

A. The work functions are: ordering, monitoring, central office provisioning, engineering, dispatch, and installation.

Q. Please identify the specific work groups which perform these functions and describe their role in the ordering and provisioning process.

A. The specific work groups and the functions performed are described below:

- The **Ameritech Information Industries Service Center** receives all electronically transmitted UNE service orders. Service representatives then review and process those orders that do not flow through and release the orders to downstream work groups for order completion and for entry in the billing, assignment, and maintenance systems.

- The **Network Element Control Center** coordinates, monitors and resolves problems with work groups responsible for line translations, or software instructions programmed into the central office switch, dispatch, central office work, and outside plant work required to support timely and accurate processing of UNE service orders.

- The **Circuit Provisioning Center - Loop Assignment Center** is responsible for the manual assignment of cable pairs for unbundled loop orders where customer

facilities terminate directly at the Ameritech switch (integrated facilities). In these cases, alternative facilities on the main distribution frame are necessary because integrated loops cannot be unbundled in their existing form.

- The **Circuit Provisioning Center - Design Group** develops design records for unbundled loop service orders requiring nonstandard circuit design.

- The **Ameritech Facilities Resolution Center** determines whether spare facilities exist before a cable pair is provided for an unbundled loop, whenever it receives a Request for Manual Assignment from the Service Center generated by a facilities conflict.

- The **Field Dispatch Center** dispatches and monitors central office technicians in order to perform central office work related to unbundled loop orders.

- The **Centralized Operations Group** dispatches and monitors outside plant technicians when outside field work is required.

- The **Field Operations Group** technicians are responsible for installation and maintenance activities taking place within Ameritech Illinois central offices. In connection with unbundled loop orders, these technicians disconnect the Ameritech Illinois end user facilities at the Main Distribution Frame and then run

jumpers from the end user's unbundled loop to the Carrier's Connecting Facility Assignment.

- The **Customer Provisioning and Maintenance Group** is responsible for any outside fieldwork required in simple dispatch situations to provide unbundled loops. Outside plant involvement is required when Ameritech Illinois facilities are not in place and/or continuity of a facility does not exist between the end-user and the serving central office.

In addition to the above workgroups, the ordering and provisioning of unbundled DS-1 digital loops is more complex and requires the involvement of the different workgroups described below:

- The **High Capacity Provisioning Center** is responsible for the design of customer ordered high capacity digital services.

- The **High Capacity Dispatch Center** dispatches and monitors outside plant technicians when outside field work is required for provisioning unbundled DS1 loops.

- The **Digital Operations Group (DOG)/Customer Provisioning and Maintenance (CP&M) Group** performs any outside field work necessary to provision unbundled DS1 loops. This work usually includes activities at the cross-box and the end-user location. The DOG/CP&M group assures there is

continuity and a working circuit between the end-user location and the serving CO.

- The **High Capacity Control Center (HCC)** coordinates, monitors and resolves problems with the various work groups that affect the unbundled DS1 loop process. The HCC also coordinates the acceptance test with the customer and completes the service order to initiate the billing process.

Also, the Outside Plant Engineer group is involved in determining if space capacity exists, and performs the necessary transmission design work and engineers any facility modifications that might be required.

Q. Please describe the methods used to gather the underlying cost data used in the nonrecurring cost studies.

A. The activity time and motion study for unbundled loops was performed under my supervision in the Service Center (SC) and Network Element Control Center (NECC) workgroups to determine how long it takes to process analog unbundled loop orders. Process completion times were broken down by work group and by process step or activity. SME interviews were used as the basis for gathering activity data in the other workgroups, since the people working in those groups have extensive experience in the provisioning process. Direct observation of the provisioning process in these work groups was used as a means to understand and document the process flow and narrative.

The following steps were followed in performing the nonrecurring cost studies:

* Identification of process owners and work groups;
* Collection of existing documentation related to process flows;
* Direct observation of work or SME/Process Owner interviews;
* Development of process mapping flowcharts and narratives;
* Process validation with applicable work group individuals; and
* Summarization of activities, average time durations, and percent probability of occurrence by network element and order type.

Q. Does each step or activity which you identified take place for every TC UNE order?

A. No. Although average durations for every process step or activity can be derived from the collection methods described above, not every step or activity occurs on each unbundled loop order. As a result, the durations must be weighted based on a "probability of occurrence" factor. The probability of occurrence information accounted for the fact that service orders vary in terms of the steps required to complete them.

Q. Could you describe how the "forward-looking environment" is reflected in the service order and line connection nonrecurring cost studies?

A. Yes. Once the "current state" analysis was completed, it was determined which service center process or network provisioning steps would be minimized or eliminated in a "forward-looking" environment over the next three years. The three-year time horizon captures any planned process improvements or system enhancements that will be deployed.

For example, in the development of the service order costs, the Service Center flows were reviewed to determine those steps that would be altered in a forward-looking environment. Based on this review, a forward-looking flow and narrative explaining process changes was developed. Additionally, a percentage was determined for each activity to reflect the degree of change the forward-look had on each task. Finally, a work flow percentage was applied to the total time for those orders requiring service representative intervention. This process was used for both the unbundled loop and ULS nonrecurring service order cost studies.

For the unbundled loop line connection cost development, process flows for the network provisioning work groups, such as the Network Element Control Center (NECC) and the Field Operations Group, were reviewed to determine those steps that would be altered in a forward-looking environment. Based on this review, activity durations, probability of occurrences, and work flow percentages were modified. For example, activity durations associated with the coordination between the NECC and the central office technician were significantly reduced in response to a planned future enhancement that will facilitate the reassignment of loop facilities.

Q. How were the activity time study results reported?

A. To illustrate how the activity time study results were reported, the data collected for processing a analog loop service order by the Service Center is included in Schedule RJF-1 attached to my direct testimony. This Schedule summarizes the activities required to process an analog unbundled loop service order, the average time duration for each activity, the probability of occurrence for each activity, the weighted average activity duration, the forward-looking factor and the forward-looking activity duration.

Q. How are the work group activities converted into dollar amounts?

A. The forward-looking work group times are multiplied by an appropriate hourly labor rate to develop the dollar amount of the nonrecurring costs. The hourly labor rates come from the Ameritech Cost Analysis Resource.

Q. How did the SMEs assist in developing the nonrecurring costs associated with unbundled digital loops?

A. SMEs were asked to review the processes, functions, and work groups and identify which would apply in provisioning unbundled digital loops. They were then asked to provide forward looking average time estimates for processing the related service order and provisioning the unbundled digital loop. See Schedule RJF-3.

Q. Please explain how the ULS service ordering nonrecurring cost study was conducted.

A. Subject matter expert interviews were employed.

Q. How did the SMEs assist in developing the nonrecurring service ordering, line and trunk costs associated with ULS?

A. We began by looking at the same service order processes, functions, and work groups that were studied to develop unbundled loop service order nonrecurring costs. SMEs were asked to review the processes, and identify which would apply in provisioning ULS, line and trunk ports which would not apply, and which time estimates would differ. They were then asked to provide average time estimates for processing a service order for a basic line port and a complex line port. The average time estimates for processing a service order were on a per-order basis.

Q. Why did you develop separate service order nonrecurring costs for basic and complex line ports?

A. The service representative spends a significant amount of time processing complex line port orders in comparison to processing basic line port orders. This is true whether we are operating under a retail, resale/wholesale, or UNE environment. Complex line port types include complex Centrex, ISDN Prime and Direct and Digital Trunking. Basic line

ports, which include basic, ground start, simple Centrex, COPTS (Coin functionality) and DID ports, generally flow through assignment and translation with little or no intervention. Service orders for complex line ports, with more features, options and other complexities, require ten times more processing time because the service representative must key in more detailed information per port.

Nonrecurring Cost Computation

Q. What cost elements make up the service order cost for an unbundled analog loop?

A. The service order cost includes the Ameritech Information Industries Service Center costs in establishing a UNE order plus computer processing costs for generating and processing a service order through the provisioning systems. The service order cost is on a per order basis.

Q. What cost elements comprise the line connection cost for an unbundled analog loop?

A. The line connection cost includes costs for the monitoring, central office provisioning, engineering, dispatch, and installation work functions. These costs are on a cost per order basis. In order to develop a line connection cost per unbundled loop, the per order costs are divided by the average number of unbundled loops on an order.

Q. Please describe the computer processing component included in the UNE service order cost and how it is developed.

A. The computer processing component included in the UNE Service Order cost represents those system-related costs incurred when a service order is generated and processed through various network operating support systems in order to provision a request for service. These expenses are associated with a contractual agreement where Ameritech pays a monthly fee to IBM Global Services for provisioning and maintaining mainframe and mid-range computer systems. In order to develop the computer processing cost, the systems involved in the provisioning process are first identified. Then the total annual costs for each respective system is multiplied by the percent of usage dedicated to processing service orders. An average cost per service order is then calculated by dividing the sum total system costs by the average annual number of processed service orders. The computer costs for processing service orders is included in nonrecurring costs because it is a direct cost associated with ordering the service/UNE being requested.

Q. Are the service ordering and line connection related work activities different for unbundled digital loops?

A. Yes, both the service ordering and line connection related work activities for these unbundled digital loops are significantly more complex than for unbundled analog loops. Unbundled digital loops are designed circuits that require significant design and engineering time to meet transmission requirements and assignment of local facilities. The service ordering and line connection costs for unbundled digital loops fall into three categories, as shown in the cost study. See Schedule RJF-3. These categories are

administrative costs, design and central office connection costs and carrier connection costs.

Q. Please define the administrative costs?

A. The administrative costs are for the service order activities performed to initiate the service request by the service center and for any order related activities performed by the 'downstream' work groups. The costs associated with these tasks are incurred on a per order basis.

Q. Please define the design and central office connection costs?

A. The design and central office connection costs are for the line connection activities associated with analyzing the TC's request for service, design of the circuit to meet transmission requirements, selection and assignment of local facilities, connection of equipment at the central office, and testing of the connections within the central office. The costs associated with these tasks are incurred on a per circuit basis.

Q. Please define the carrier connection costs?

A. The carrier connection costs are for the line connection activities required to make the physical connections from the serving wire center to the TC, including the coordination and testing necessary to ensure that all transmission parameters have been achieved

consistent with the applicable specifications and technical references. The costs associated with these tasks are incurred on a per termination basis.

Q. Were the administrative, design and central office connection and carrier connection cost studies for unbundled digital loops submitted in the UNE Docket 96-0486/0569 (Consol.)?

A. No. In the UNE Docket, the service order and line connection costs were only developed for basic residence and business analog unbundled loops. The resultant rates were then broadly applied to all unbundled loop types, both analog and the more complex digital loops. However, with greater experience, Ameritech Illinois has come to realize that significant cost differences exist in providing more complex digital loops. Accordingly, a separate study of nonrecurring costs associated with such loops was undertaken for this docket. The results of the study are shown on Schedule RJF-2, page 2).

Q. Please explain the combined platform (UNE-P) service order process and how the cost is developed.

A. When a TC requests a UNE-P, two service orders are processed by Ameritech, one for the ULS port and one for the unbundled loop. The TC electronically transmits a UNE-P service order request to the Ameritech Information Industries Service Center. Here, a service representative processes the request, resulting in a ULS service order being issued. The TC is charged the current ULS service order rate. Upon completion of this

ULS service order, the Mechanized Order System (MOR-TEL) generates electronically an unbundled loop "Billing Only" order. Since the unbundled loop order flows in an automated manner through the operating systems, the only loop nonrecurring service order costs incurred are the computer service order processing costs described earlier in my testimony.

Q. Are CP&M costs included in your nonrecurring cost studies?

A. No, they are not. Historically, CP&M costs (i.e., costs that relate to outside field work) for simple dispatch situations have been included as a portion of the recurring costs for bundled loops associated with retail local exchange service. This approach was also used in the UNE docket. For consistency, Ameritech Illinois will include these CP&M costs in the recurring cost study for unbundled analog loops to be submitted in its April, 2000 merger compliance filing.

Q. Does the unbundled loop line connection cost study reflect both simple and complex dispatch situations?

A. Yes, although complex dispatch costs were not included in our prior loop line connection cost study, because these costs were to be recovered through special construction charges.

Q. What is a complex dispatch situation?

A. A complex dispatch situation is one where extensive facility modifications are necessary.

Q. What is a simple dispatch?

A. In a simple dispatch, the field technician normally will drive to the end user's premises and, in the simplest case, terminate the customer's drop at the network interface device.

Q. Why are you now reflecting both simple and complex dispatch situations in your line connection cost study?

A. Ameritech Illinois, in Docket 99-0953, is proposing a new special construction plan that would eliminate charging special construction for complex dispatch situations involving the following types of facility modifications:

- Line and Station Transfer
- Clear Defective Pairs
- Wire Out of Limits
- Break Connect Through

As a result, in order to ensure that the average costs for these situations are in fact recovered, they are being melded into the new nonrecurring line connection cost study for unbundled loops submitted in the instant proceeding, based on an estimated probability of occurrence of less than 1%. See Schedule RJF-3. When the proposed changes to the special construction plan become effective, Ameritech Illinois will monitor the frequency

of these complex dispatch situations and make any necessary modifications to its cost studies in future filings if the probability of occurrence factor or some other input to the study charges significantly.

Q. Please summarize the results of your nonrecurring cost studies?

A. Schedule RJF-2, attached to my direct testimony, consists of two pages that summarizes the results of these nonrecurring cost studies. Also, Schedule RJF-3 contains the nonrecurring service order and line connection cost studies. The current study is based on a bottoms-up highly detailed approach based on both actual observable operations and SME's UNE experience to date. Supporting work papers are attached as part of Schedule RJF-3.

Q. Does this conclude your direct testimony?

A. Yes, it does.